

Borough of



Wolverhampton.

REPORT

ON THE

HEALTH OF THE BOROUGH

OF

WOLVERHAMPTON

FOR THE YEAR 1889.

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REPORT

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HEALTH OF THE BOROUGH

OF

WOLVERHAMPTON,

FOR THE YEAR 1889,

BY

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MEDICAL OFFICER OF HEALTH.

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MEDICAL OFFICER'S REPORT, 1889.

Prevalence and Prevention of Infectious Disease.

LOOKING at the two final columns of Table 9, we see that, as far as the deaths are an index, this year has been a remarkably average one as regards the prevalence of Zymotics, the only exceptions being Whooping Cough, which considerably exceeded the average, and Scarlet Fever, which fell very far below it.

Measles.—The remarkable prevalence of Measles, which was commented on in last year's report, still continues, and with even less remission; the epidemic proportions which it began to assume in the Fourth Quarter of 1888 were not maintained, the number of cases reported rapidly diminished, but still the disease kept in the Borough in considerable amount, wandering slowly from one quarter of the town to another, as it has done now ever since the severe epidemic of 1886; the West Sub-District suffered most last year, but it was passing into the East at the close, and this year the proportion, both of cases and deaths, in the two Sub-Districts has been about reversed; the epidemic threat of last year was in the district lying between Darlington Street and Dudley Road; the First Quarter this year most of the cases were in the Steelhouse Lane and Bilston Road neighbourhood, in the Second

Quarter they extended towards Walsall Street and Horseley Fields, in the Third towards Stafford Street and Cannock Road and a few cases in the Whitmore Reans, but the total number of cases reported this Quarter were very few, although the deaths were high; in the Fourth Quarter more cases were reported, nearly all from the Steelhouse Lane and Horseley Fields region, but the deaths were few, and at the close of the year the cases had very much diminished. The fatality this year was greater than last (40 deaths to 597 cases, last year there were 39 deaths to 869 cases), and this extra fatality is equally marked in both Sub-Districts; this statement is qualified by the fact that the number of cases reported to us may not always be the same proportion of the total number of cases occurring.

Scarlet Fever.—The deaths from Scarlet Fever (6, one being very doubtful) this year, are the lowest but one recorded, we had only five in the 1886; the returns of reported cases are really remarkable, see Table 1; the figures in this Table are very low for the First Three Quarters, and, as usual, this is most marked in the East Sub-district, where we actually had only one case reported in the First two Quarters. The mortality in the East is even more remarkable, there being only one death from Scarlet Fever during the year, in the Third Quarter, and that one having been already reported as a case of Measles, and then on dying being returned as Scarlet Fever, I found, on enquiry, so little to justify the latter diagnosis, that I have not included it in the reported cases in Table 1; this return is unprecedented. During the Third and Fourth Quarters of 1887, we had (after a period of Five Quarters very great remission) rather an alarming prevalence of Scarlet Fever, this was efficiently controlled, and, though it continued into the First Quarter of 1888, we had no threat of any epidemic during that year; but there was no very marked remission, a considerable number of scattered cases being constantly reported; the Borough Hospital was freely utilized, being kept for the First Three Quarters almost constantly full, and at times over-full; during the Third Quarter of 1888, the number of reported cases fell off greatly, and this continued during the First Three Quarters of this year as noticed above, during the Third Quarter, however, there was again a slight increase, and during the Fourth Quarter we had the largest return we have had in any Quarter since I have kept records; this, and the fact that Scarlet

Fever was badly epidemic in neighbouring districts, and in several parts of the Country, rendered this the most anxious and trying time we have had since my appointment as Medical Officer. The increased number of reported cases was, no doubt, partly due to the adoption, on December 1st, of the Act for the Compulsory Notification of Infectious Diseases, but only partly, for we, sooner or later, heard of most cases of Scarlet Fever before the adoption of the Act, which ensures our having a much earlier knowledge of most of the cases, but does not very greatly increase the total number heard of.

The following is a more detailed account of the disease in the Sub-districts.

East.—During the First Quarter, the only case was one in a house where there were ample means of home isolation, these were not utilized until after repeated injunctions; but the other children in the house (4) had already had Scarlet Fever, and the sick child (æet 3) was too young to get about much, so that the risk of extension was slight. We heard of no other case for over five months (excepting that mentioned above, which was reported as Measles at the close of the Second Quarter, and returned as Scarlet Fever in the death returns the first week of the Third Quarter), in the Third Quarter seven cases were reported, all of these were removed to the Borough Hospital; two of these cases were in one house, so that there were only 6 centres this Quarter; one case occurred in a house where there were five adults and ten children. In the Fourth Quarter we heard of 37 cases, 22 were removed to the Borough Hospital, one was a nurse there, one was taken by the friends to the General Hospital, 13 were treated at home; one of these was found out of doors peeling, on January 3rd, 1890, and then removed to the Borough Hospital. The following cases illustrate various important points, (the numbers are from the general record of infectious cases and recommence each Quarter).

Case 3.—Girl, æt 13; had been ill for a month, now going out, and about to recommence school; peeling freely on hands.

Case 1.—*k* Charter Street; several neighbours in the kitchen where sick child lay on a sofa.

Case 11.—*c* Charter Street; parents and four children, two bedrooms.

Case 12.—St. Matthew Street; parents and six children, two bedrooms.

Case 21.—St. James Street; parents and seven children, three bedrooms.

Case 53.—East Street; parents and five children, 2 small bedrooms; sick child had been three days ill, the other four were now at school.

Case 54.—Bath street; parents and three children, one bedroom.

Case 214.—Horseley Fields; child a fortnight ill, a sister now attending school; only one bedroom; mother nurses neighbours' children; sick child found peeling freely and playing in yard with other children.

The above cases were all removed to the Borough Hospital, I mention them as illustrating the circumstances from which many are removed.

West.—In the First Quarter nine cases were reported, six of these were removed to the Borough Hospital, two of the others were well isolated at home, the third was a death, we only heard of it when the father sent to have the house disinfected after the funeral, the death was returned to us as due to convulsions only. In the Second Quarter only two cases were heard of, both in Hall Street, both were removed to the Borough Hospital. In the Third Quarter sixteen cases were heard of, eleven of these were treated at the Borough Hospital; one case could hardly be reckoned as Hospital isolated, it having been ill four or five weeks before admission; two were well isolated at home. The following are worth mentioning.

Cases 112 and 113.—*h* Clifton Street; parents asked for disinfection; on making inquiries we found these two children had been ill a fortnight, and well cared for up to now, when all precautions were dropped, and dressmaking carried on in the house, parents under the impression that all risk was over; the children were peeling freely, they were removed to the Borough Hospital three days later, but this was in the next Quarter.

Cases 69, 70, 71, 72, and 73.—In two communicating houses in Ablow Street; 73 ill six weeks ago, 69, five weeks ago, 71 and 72, three weeks ago, 70, two weeks ago, all peeling freely, and all going about except 71, who was too young; a doctor had seen 69 once, the others no medical man until now. All removed to Borough Hospital except 71, whom they would not part with.

Case 86, Sept. 3; 91, Sept. 10; 104, Sept. 16.—From a house in Petit Street, two bedrooms, parents and seven children; each case was removed to Borough Hospital as soon as heard of.

In the Fourth Quarter we had fifty-two cases reported, these were from almost all the town parts of the Sub-district, they represent 34 centres, a number enough to cause very great apprehension. These centres were situated as follows;—Dudley Road 3, Ash Street, Church

Lane, Cooke Street, Dudley Street, Dunstall Road, Newhampton Road, Pearson Street, Stevensgate 2 each, Baker Street, Great Brickklin Street, Clarke Street, Coleman Street, Fisher Street, Hallets Row, Hunter Street, Merridale Street, Park Street, Poole Street, Stewart Street, Sweetman Street, Thomas Street, Middle and Lower Vauxhall 1 each. Of these 52 cases 31 were removed to the Borough Hospital, 2 were removed to the General Hospital (Borough Hospital being full), and 19 were isolated more or less imperfectly at home, these 19 cases constituted 12 distinct centres; all more or less dangerous, some exceedingly so. The following are some details worth notice.

Cases 13 and 16.—Parents and three children, only one habitable room; 13 had Scarlet Fever and Chicken Pox, removed to Borough Hospital; a few days later 16 had Scarlet Fever and was also removed.

Cases 38, 39, and 40.—38 ill with Scarlet Fever, on October 21st, 39 on the 23rd, 40 on the 25th, then heard of; two bedrooms, four adults and eleven children, with great difficulty persuaded them to allow the sick children to be removed.

Cases 96 and 97.—96 ill on November 8th, 97 on 11th, heard of on 13th; one bedroom, parents and six children; removed.

Cases 154 and 155.—154 ill on November 19th, 155 on 20th, heard of on the 21st; two bedrooms, three adults and five children; removed.

Cases 242 and 243.—242 ill on December 19th, 243 on the 21st, heard of on the 23rd; three other children, one bedroom; removed.

I draw attention to these details for the same reason as I did those in the East, in order to show the importance of our work of Hospital isolation; the mere fact that a certain number of cases were removed to the Hospital, although important, gives only a very slight idea of the real good done; but when we take such circumstances as the above into account, and consider what must have happened if these cases had been allowed to remain in such surroundings, then we must see the absolute necessity of what is being done; and we can feel the force of the conclusion drawn in all our late reports that our decidedly diminished mortality from Scarlet Fever is due to our Hospital preventive measures. It is worth remark that in none of the instances mentioned above did any case of Scarlet Fever, beyond what is given there, occur in those families, after the removals. In contrast to the foregoing, the following are worth recording.

Cases 168, 233, and 237.—168 ill on November 23rd, reported on December 3rd as fairly well isolated at home; a roomy house, only two other children. 233 reported as having Scarlet Fever on December 19th; 168 was running about the house, peeling, on December 13th, parents thought all was right. On the 21st, case 237, the only remaining child in the house, was reported as being ill with the Fever.

Cases 181, 182, 183, 184, 185, and 186.—All the children in the house (a fair-sized one) took Scarlet Fever rapidly one after another, their mother indignantly rejected our advice and offers of assistance, saying she knew perfectly well how to isolate them herself.

The total 124 cases of Scarlet Fever have been heard of through the following sources, Parish Medical Officers, 22; other Medical Men, 44; Parents, *asking for admission to Borough Hospital*, 19; Parents asking for disinfection (when case was over), 7; Parents, by Doctor's advice, 3; Sanitary Inspectors, 11; School Inspectors, 5; Private Information, 8; other sources, 5. It is becoming yearly more common for parents to request that their children may be admitted to the Borough Hospital.

The following table exhibits the cases, and removals to the Borough Hospital in each Quarter, from each Sub-District.

QUARTERS.				1st.	2nd.	3rd.	4th	Year.
EAST	Total	Cases	...	1	...	7	37	45
		Deaths	...	...	...	...	...	...
	Removals	Cases...	..	...	...	7	22	29
		Deaths	...	...	...	...	...	...
	Total	Cases	...	9	2	16	52	79
		Deaths	...	2	...	...	3	5
WEST	Removals	Cases...	...	6	2	11	31	50
		Deaths	...	1	...	...	2	3

Borough Hospital.—As this Institution is at present solely used for the isolation of Scarlet Fever, an account of its work may be introduced here. At the beginning of the year there were ten cases of Scarlet Fever remaining in from 1888; nine of these cases were discharged cured in January, (one had very troublesome nephritis), one died; during January and February three cases of Scarlet Fever were admitted, and (of course through error) one case of very severe acute Pneumonia, and one of bad Stomatitis; by the 19th March, all of these cases had gone out well leaving the Hospital empty. On March 23rd, a very bad case of malignant Scarlet Fever was admitted, and died on the 27th; on the 25th and 27th two more cases of Scarlet Fever were admitted and remained in until May 2nd; on the 18th and 19th of April, two cases were admitted and discharged well on June 2nd, leaving the Hospital again empty; it remained so until July 5th, when two cases of Scarlet Fever were admitted; on July 17th another, on August 14th another, and on August 24th five cases were admitted; cases then came in more regularly, in September eleven were admitted, in October eighteen; and two cases admitted on the 11th and 14th October proved to have Whooping Cough very badly, as well as Scarlet Fever. One case admitted on October 21st proved not to be Scarlet Fever, and was discharged on the 30th; one case was very severe and died five days after admission. In November, sixteen cases were admitted; two were found not to be Scarlet Fever; one was one of our own nurses; one case was 120 days in with very severe Nephritis. In December (up to the 28th the close of our year) 24 cases were admitted, two proved not to be Scarlet Fever, one was a malignant case and died the day after admission; three had troublesome sequelæ. The most serious occurrence was in connection with a case admitted on December 3rd, evidently peeling after Scarlet Fever, 8 days later he developed Measles, having almost certainly had the infection already taken before his admission; we had to send him to the General Hospital, as we had then no isolation ward; in consequence of this unfortunate case, we had a slight outbreak of Measles amongst our Scarlet Fever cases; on December 22nd another case had to be sent to the General Hospital with Measles, on the 26th two more (and on January 9th and 24th two more were sent). The summary of the year is, remaining in from last year 19, admitted during the year 88, total of cases 98; discharged well 59, died 4, removed to the General

Hospital on account of Measles 4, proved not to be Scarlet Fever 6, remained in at close of year 25. Of these twenty-five cases, 2 were since sent to the General Hospital with Measles, and 23 were discharged well. The average stay in the Hospital of the 67 cases of Scarlet Fever discharged during the year was 42 days. Very fortunately the disease was of a mild type, but few of the cases proving severe, had it been otherwise we could never have managed to take so many cases, indeed as it was both wards and administrative block were quite seriously overcrowded, the accommodation for the requisite nursing staff in the latter being particularly inadequate; and even with this over-pressure we could not take in all the cases that really needed it; three cases having to be sent to the General Hospital; and several left at their homes under very unsatisfactory circumstances; although we isolated many more cases last year, and had at one time much over-pressure, yet then the cases were more evenly distributed throughout the year; this time the great rush in the last two months really overpowered us. On pages 10 and 11 of last year's report, I have fully pointed out the deficiencies of our present provision, and it would be superfluous to dwell on them again now, especially as the whole subject has been fully laid before the Sanitary Committee and the Council in a recent special report, and is now being thoroughly dealt with.

Diphtheria.—Hitherto our knowledge of Diphtheria has been so scanty as to be scarcely worth commenting on, this year we only heard of twelve cases; with seven deaths registered there must have been many more cases; indeed, in the East Sub-District the only four cases heard of were four deaths, in the West there were three deaths and eight cases heard of; in future we may hope for a fuller knowledge of the prevalence of this disease, since its notification is now compulsory. Of the four cases in the East two were heard of through the Registrar of Deaths, and were unaccounted for; the others were heard of earlier, one from our Inspectors, the other reported under the Act (in December), in the former case there was an untrapped drain; in the latter there was a defective drain, and pigs and manure were kept at the back of the house. Of the eight cases in the West, one, a death, was heard of from the Registrar, nothing was made out; four others (one fatal) were in one house, there was a bad untrapped drain; the remaining three were also in one house, one died on August 28, and was certified as 'Croup,' the other two were taken ill about five and fifteen days later, nothing definite was made out.

Typhoid Fever.—As regards our knowledge of its prevalence this disease is on the same footing as Diphtheria; however, our small death return shows that we have not only been free from any epidemic but singularly free from this disease at all. Of the thirty-one cases heard of, nineteen were separate cases; eleven of these were quite unexplained, of these eleven, four were only heard of many weeks late, one was a very doubtful case; of the other eight separate cases, one came ill from a distance, six were associated with bad drainage defects, and one used well water, which however was not condemned on analysis. Of the twelve not separate cases, five were in adjacent houses and connected with very bad drainage defects, three were in another house with bad drainage, two came home ill from the seaside, the remaining two were in one house, the second case probably caught the disease from the first, and the latter was unaccounted for; the first was not heard of until some three or four weeks after recovery.

Diarrhœa.—We have suffered rather severely from Diarrhœa, although not at all to the same extent as in really bad years (see Table 9); strange to say the deaths are equal in both Sub-Districts, but of children under 5 rather more in the East (42 to 39), this however represents a really larger proportion of cases in the West, for the child population of the West is much less than that of the East.

General Statistics and Condition of the Borough.

Taking everything together, the year has been a rather good one as regards our mortality returns (see Table 9), the death-rate is much below the average, and the deaths from the causes specified in that Table are rather below the average (except Whooping Cough), and the Zymotic death-rate is much below the average; but there is one very unfavourable item, the deaths of children are much above the average, and these deaths form a better index than any others of general sanitary condition (apart from actual prevalence of Zymotics). Turning to Table 2, we see that the East Sub-District is mainly to answer for these deaths, and further, that the general death-rate there (22·2) is terribly high compared with the West (16·9). Of the 872 deaths in the East considerably more than half (448) are of children under 5 years of age;

Table 3 shows three factors in the difference in the total, and children's deaths, between the Sub-Districts; first, Measles, that has already been considered; second and third, Phthisis and Respiratory diseases, the excess of the East in these returns is really terrible; for the Respiratory diseases I feel sure the greater poverty and the worse general state of repair of the buildings in the East are mainly responsible, they are simply due to less efficient food, and less efficient protection from cold; the same explanation holds for the Phthisis amongst adults, but for the Phthisis amongst children under 5 some further explanation is needed, for we find the deaths from this cause in the East twelve times those in the West (36 to 3); part of this is due to some variety in the meaning of the Phthisis, almost all the cases of Phthisis under five years are returned by one Practitioner in the East, that it is not used in the ordinary sense of Pulmonary Phthisis is evident from the fact that these returns of children occur at quite other times from those of ordinary Phthisis, 24 of them in the summer months, 19 of these when summer Diarrhœa was prevalent, the last fact suggests that the term is used indefinitely for wasting abdominal disease. On turning to Tables 5 and 6, we see some other interesting points; the very unsatisfactory return of "Debility, &c.," gives of children under five, 50 deaths in the East to 33 in the West; here again it is noticeable that in the East, in the Third Quarter when Diarrhœa and Phthisis answer for most children's deaths, the "Debility" return is almost wanting. It is pretty evident that any particular conclusions are impossible from such vague premises, but some general ones are evident. It is evident that the East Sub-district is in some matters so inferior to the West, that children from Respiratory diseases and adults from Respiratory diseases and Phthisis suffer there to double the degree they do in the West, and that children in the East suffer from some ill-defined wasting diseases to a far greater degree than in the West, and as a consequence the death rate in the East is very high, and 5·3 higher than the West; and in considering the meaning of this it must be remembered that the West rate is not itself what it might be, it is higher than the rural districts of England (see Table 10) and these are not perfection. If our Borough were divided into two Sub-districts, one to include the Springfield vicinity, and our present West, omitting the area lying between Little Brickkiln Street and the back of Darlington Street on that side; and the other

Sub-district taking in this latter area and our present East, minus Springfield, then the contrast would be far greater between such Sub-districts than even between our present ones, and it would be even more evident than now in what a very defective condition much of our Borough is. I have dwelt in former reports on what this defectiveness consists, and how difficult and slow, and at times regressive, the work of improvement is; the work is on the whole progressive, but unless we continue fully alive to our imperfections, we may lose sight of the necessity for carrying on this work with energy. To one intimately acquainted with our insanitary conditions, and with the very great difficulty of dealing with them, the work is at all times very disheartening; the utter negligence and stupidity of the tenants of bad property themselves, the selfishness and shortsightedness of many of the agents and property owners; and the cumbrous and inefficient legal methods of enforcing even urgent work; form together an amount of obstruction very hard to overcome. At times some one, not so familiar with these matters, notices some defect, and exclaims against the inactivity of the Sanitary Staff; the defect being probably one of many far worse that we are slowly getting right; or again we constantly receive complaints of nuisances from people who think we can deal with them peremptorily, and think us most negligent if we do not; I only wish we could. I am sure that year by year we have more enlightenment as regards sanitary matters, and that sanitary work is more appreciated and more readily done; but for many cases prompter legal measures are necessary, what now often takes three weeks should take less than three days, it would be no more hardship to the offender to comply with our requisitions to-day than in three week's time, the suffering public would be greatly benefited, and our work rendered easier as well as more expeditious.

It is only fair to add that we compare favourably with the other large towns, the twenty-seven large towns of England taken together represent a population far less poor than ours is, and we are, from our elevation and aspect, much more exposed to effects of severe weather than they, as a whole, are, and yet our returns are in many respects better than theirs; this is partly seen in Table 10, which shows a lower general death-rate for Wolverhampton, although the Fourth Quarter, on account of weather, tells against us.

During the year, 1183 circular letters were served, calling attention to nuisances existing, 29 remained on hand from last year; 665 of these were complied with, and in 449 a formal notice was required, leaving 98 on hand. Of formal notices for the abatement of nuisances 879 were served, 50 remained on hand from last year, 884 were complied with, leaving 45 on hand.

Unwholesome Food.—6 beasts, 10 sheep, 2 lambs, 11 pigs, and 53 pounds of pork were condemned and destroyed as unfit for food; notice of these was given. 2 carcasses of beef (tuberculous), 2 sheep, and 9 codfish were seized by our Inspectors, and destroyed under Magistrates' Orders.

Disinfection.—90 houses have been disinfected with sulphur fumes, and 1 cab; 1854 articles of clothing have been disinfected at the Borough Stove; 4 mattresses were burnt.

Explanatory Remarks on the Tables.

The Returns made by the Registrar for the East Sub-District include all deaths occurring in the General Hospital and Workhouse; many of these are from outside the Borough, others from the West Sub-District, and others are returned as "no home"; the particulars of these cases are all entered in Table 7. In all the Tables for the Sub-Districts the deaths are referred to where they belong, and in all the Tables only cases belonging to the Borough are entered for the last three years, except in Table 9, where the Borough totals include "no homes," in order to compare with former years; in Table 8 the comparison between the Sub-Districts in all years before 1884 is misleading, as the East deaths include many really belonging to the West.

The populations of the Borough and of each Sub-District being estimated separately, the former is not the sum of the latter.

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Area of the Borough, 3,440 acres.

Population 1881 (census April), 75,766.

TABLE No. 2.
Weekly RETURN of BIRTHS and DEATHS during 1889.

1889. Week ending		BIRTHS.												DEATHS.																																
		East Sub-District.				West Sub-District.				Borough.				East Sub-District.						West Sub-District.						Borough.						In Public Institutions.														
		Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 Years	Under 1 Year	Under 5 Years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 Years	Under 1 Year	Under 5 Years	Uncertified.	Inquests.	Males.	Females.	Total.	Rate per 1000 per annum.	Over 60 Years	Under 1 Year	Under 5 Years	Uncertified.	Inquests.	Not belonging to Borough.	No Home.	Belonging to West Sub-Dist.	Total in Hospital.	Total in Workhouse.					
January	5th	20	16	36	47.8	9	14	23	27.5	29	30	59	37.2	6	14	20	26.5	2	8	13	1	4	2	5	7	8.3	3	8	19	27	17.0	5	8	13	1	4	1	2	..	1	2		
"	12th	17	13	30	39.8	12	10	22	26.3	29	23	52	32.8	8	9	17	22.5	4	5	11	..	2	15	9	24	28.7	5	6	10	..	1	23	18	41	25.9	9	11	21	..	3	7	..	5	3		
"	19th	14	15	29	38.5	19	6	25	29.9	33	21	54	34.1	13	13	26	34.5	9	5	8	..	2	3	3	6	7.1	1	2	3	16	16	32	20.2	10	7	11	..	2	5	1	4	1		
"	26th	14	16	30	39.8	8	12	20	23.9	22	28	50	31.6	6	6	12	15.9	5	..	2	..	1	7	8	15	17.9	6	3	4	13	14	27	17.0	11	3	6	..	1	1	..	2	5		
February	2nd	11	17	28	37.2	24	16	40	47.8	35	33	68	42.9	9	14	23	30.5	5	6	8	..	2	5	9	14	16.7	4	1	3	..	1	14	23	37	23.3	9	7	11	..	2	3	1	2	8		
"	9th	15	17	32	42.5	12	6	18	21.5	27	23	50	31.6	10	8	18	23.9	5	4	8	..	2	6	7	13	15.5	..	4	4	14	15	31	19.5	5	8	15	..	3	3	1	2	1		
"	16th	12	16	28	37.2	16	10	26	31.1	28	26	54	34.1	5	9	14	18.6	5	4	4	9	5	14	16.7	7	4	5	..	1	14	14	28	17.6	12	8	9	..	1	..	1	3	6		
"	23rd	12	13	25	33.2	9	19	28	33.5	21	32	53	33.4	10	11	21	27.9	7	6	12	..	1	9	8	17	20.3	3	6	8	..	1	19	19	38	24.0	10	12	20	..	2	3	..	2	4		
March	2nd	13	18	31	41.1	9	15	24	28.7	22	33	55	34.7	7	7	14	18.6	5	3	6	..	1	9	10	19	22.7	8	4	7	..	1	16	17	33	20.8	13	7	13	..	2	1	..	2	1		
"	9th	9	14	23	30.5	8	11	19	22.7	17	25	42	26.5	7	14	21	27.9	4	5	12	..	2	11	8	19	22.7	6	3	7	..	1	18	22	40	25.2	10	8	19	..	3	3	..	6	5		
"	16th	20	14	34	45.1	16	18	34	40.6	36	32	68	42.9	9	6	15	19.9	5	7	7	1	3	9	10	19	22.7	4	2	2	18	16	34	21.4	9	9	9	..	3	3	..	6	5		
"	23rd	24	14	38	50.5	15	12	27	32.3	39	26	65	41.0	9	7	16	21.2	5	4	7	..	3	3	9	12	14.3	3	4	5	1	1	12	16	28	17.6	8	8	12	2	1	3	..	1	2		
"	30th	12	8	20	26.5	11	11	22	26.3	23	19	42	26.5	7	10	17	22.5	6	4	6	..	3	7	7	14	16.7	7	3	5	..	1	14	17	31	19.5	13	7	11	..	4	..	2	3	1		
1st Quarter	...	193	191	384	39.2	168	160	328	30.1	361	351	712	34.6	106	128	234	23.9	67	61	104	2	23	95	98	193	17.7	57	42	66	1	8	201	226	427	20.7	124	103	170	3	31	29	6	19	41	40	
April	6th	9	10	19	25.2	11	12	23	27.5	20	22	42	26.5	7	12	19	25.2	5	4	8	9	6	15	17.9	5	3	6	16	18	34	21.4	10	7	14	2	..	1	2	1	
"	13th	8	12	20	26.5	15	14	29	34.7	23	26	49	30.9	7	7	14	18.6	3	6	6	1	..	4	3	7	8.3	4	..	1	11	10	21	13.2	7	6	7	1	..	5	..	1	3	4	
"	20th	14	10	24	31.8	12	15	27	32.3	26	25	51	32.2	9	4	13	17.2	3	4	6	..	1	6	6	12	14.3	2	2	6	15	10	25	15.8	5	6	12	..	1	1	1	3	1		
"	27th	10	17	27	35.8	14	13	27	32.3	24	30	54	34.1	13	9	22	29.2	7	7	11	..	5	6	8	14	16.7	1	7	9	..	1	19	17	36	22.7	8	14	20	..	6	7	1	1	7		
May	4th	21	23	44	58.4	8	11	19	22.7	29	34	63	39.8	9	8	17	22.5	4	5	8	..	2	6	1	7	8.3	..	2	3	1	..	15	9	24	15.1	4	7	11	1	2	1	2	4
"	11th	7	8	15	19.9	5	15	20	23.9	12	23	35	22.1	9	12	21	27.9	8	1	3	..	5	11	3	14	16.7	3	3	7	..	1	20	15	35	22.1	11	4	10	..	5	1	2	1	
"	18th	17	16	33	43.8	18	19	37	44.2	35	35	70	44.2	11	9	20	26.5	5	6	10	..	2	6	4	10	11.9	1	4	5	1	1	17	13	30	18.9	6	10	15	1	3	2	..	1	..	1	4
"	25th	17	12	29	38.5	13	16	29	44.7	30	28	58	36.6	5	7	12	15.9	2	8	8	1	1	6	4	10	11.9	1	3	5	1	1	11	11	22	13.9	3	11	13	2	1	..	1	2	
June	1st	18	19	37	49.1	12	4	16	19.1	30	23	53	33.5	8	4	12	15.9	..	7																											

TABLE No. 3.—Weekly Returns of Deaths from various Diseases in the Sub-Districts.

[illegible]

TABLE No 4.

WEEKLY METEOROLOGICAL REPORT.

From observations taken at the Park Meteorological Station at 9 a.m. daily.

(Height above Sea Level, 430.25 feet. Receiving surface of rain gauge, 1ft. above ground.)

(Height above Sea Level, 100 to 1000 feet)													
Week ending		Barometer uncorrected.			Average Humidity.	Temperature.				Rain.	Wind.		
		Highest.	Lowest.	Att. Ther.		Max.	Min.	Mean.	Earth.		Prevailing Directions.	Total in Week.	
									1-ft.				4-ft.
		In.	In.	°	0-100	°	°	°	°	In.		Miles.	
1889.													
January	5th	30.300	29.600	40	95	37.0	18.5	27.7	36.7	43.0	—	N, W, SW.	160
	12th	29.670	28.850	40	92	45.0	18.0	33.2	36.6	42.5	.28	SW, S. NE.	1355
"	19th	29.950	29.476	45	94	50.5	30.0	36.7	38.2	42.0	.03	NW, SW, SW.	1080
"	26th	30.106	29.800	45	93	47.0	24.0	38.6	39.4	42.0	.04	NW, NE, W.	815
February	2nd	30.150	29.400	45	90	54.0	24.5	39.8	40.9	42.0	.29	SW.	1900
"	9th	29.850	29.100	45	91	48.0	24.0	34.6	39.2	42.3	.90	W, SW, N.	2420
"	16th	29.750	29.050	40	86	48.0	16.5	31.5	36.8	41.7	.88	SW, W, N.	1660
"	23rd	30.000	29.700	40	88	55.0	25.0	39.4	39.3	41.0	.15	W, N.	1500
March	2nd	29.850	29.250	45	90	38.0	24.0	30.2	37.5	41.0	.09	NE.	825
"	9th	29.650	28.900	45	87	45.0	23.5	32.6	37.5	41.0	1.96	SE, E, SW.	1390
"	16th	30.150	29.350	45	86	52.0	27.0	38.4	38.0	40.0	.08	NW, W,	1040
"	23rd	29.850	28.500	45	82	54.0	22.7	39.0	41.0	41.0	.41	SW, W, NW.	1640
"	30th	30.000	29.500	45	84	59.0	25.0	42.8	43.0	42.0	.45	W, N.W.	1720
April	6th	29.700	28.750	45	87	51.8	32.0	39.8	43.9	43.0	.82	NW, N, E.	1600
"	13th	29.400	28.950	45	96	49.0	30.3	37.4	43.4	43.0	1.38	NE, NE, E.	1450
"	20th	29.800	29.400	45	81	63.0	28.0	42.6	45.0	43.5	.02	N. N, NW.	1370
"	27th	29.600	29.000	45	77	58.0	33.0	43.8	46.4	44.0	.97	SW, N, SW.	1342
May	4th	29.550	29.200	45	79	68.0	34.0	46.3	47.6	45.0	.69	SE, SW, SW.	1558
"	11th	29.550	29.350	45	86	69.0	44.0	53.0	52.4	46.0	1.36	SE, SW, N.	1260
"	18th	29.600	29.450	50	94	64.0	43.7	49.2	52.4	47.0	.22	NW, E, SE.	505
"	25th	29.750	29.250	55	71	76.0	42.5	56.8	57.1	49.0	.83	E, SW, N.	605
June	1st	29.550	29.250	60	87	60.0	44.0	49.8	55.9	51.0	2.00	NE, SW, SW.	1470
"	8th	30.100	29.350	60	83	75.0	40.7	57.7	59.4	51.5	.61	NE, SW, NE.	870
"	15th	29.650	29.250	60	77	70.5	44.5	53.0	59.5	53.0	.08	NE, SW.	720
"	22nd	29.900	29.750	60	76	76.3	43.5	56.2	60.7	54.0	—	NE, E.	930
"	29th	29.900	29.700	60	78	79.0	47.0	59.1	61.5	55.0	—	NE, N.	530
July	6th	30.100	29.800	60	73	78.0	44.5	58.8	63.0	56.0	.10	NE, NE, W.	870
"	13th	29.675	29.350	60	81	70.5	43.7	56.7	61.4	56.5	1.02	W, S, E.	970
"	20th	29.650	29.450	60	78	68.0	40.5	54.3	60.0	57.0	.58	W, NW.	1075
"	27th	29.550	29.150	60	77	67.0	43.0	54.2	59.5	56.5	.36	SW, NW, N.	1500
August	3rd	29.800	29.400	60	79	77.3	47.5	60.7	62.2	56.5	.14	NW, SW, SW,	1090
"	10th	29.725	29.300	60	81	70.0	46.5	56.0	60.8	57.0	1.30	SW.	1170
"	17th	29.650	29.200	60	84	71.0	47.0	55.7	60.1	57.0	.26	W, NW.	1380
"	24th	29.600	28.900	60	84	66.0	43.0	53.7	58.8	57.0	1.28	SW, NW.	1315
"	31st	29.850	29.500	60	80	78.0	40.5	55.3	57.9	57.0	.06	W.	1060
September	7th	29.950	29.650	65	88	68.9	48.0	57.1	60.2	56.5	.82	E. NE, E.	905
"	14th	30.000	29.700	60	89	75.5	43.0	57.5	61.0	57.0	.04	SW.	870
"	21st	30.100	29.275	55	75	61.5	35.0	48.5	56.2	57.0	.49	SE, SW, NW.	1000
"	28th	29.750	29.150	50	86	62.0	33.8	47.1	52.1	55.5	1.26	NW, SW.	1645
October	5th	29.600	29.200	50	92	56.0	33.0	47.1	52.0	53.5	.72	N, SW.	935
"	12th	29.450	28.700	50	86	58.0	30.0	46.1	50.1	53.0	1.08	SW.	1415
"	19th	29.550	28.800	50	94	57.5	28.0	45.6	49.1	52.0	.73	S, SE.	990
"	26th	29.850	28.800	50	94	53.0	32.5	43.5	48.6	50.0	.55	NE.	1290
November	2nd	29.500	29.100	50	89	54.0	36.0	43.8	47.5	49.0	1.19	W.	1730
"	9th	30.100	29.350	50	91	60.0	33.0	45.6	46.5	49.0	.03	SW, NW.	865
"	16th	30.100	29.900	50	95	55.0	31.5	44.5	47.8	49.0	.07	N, SW, S.W.	695
"	23rd	30.250	29.900	50	93	53.0	35.0	43.9	47.5	49.0	.17	SE, SW.	835
"	30th	29.800	29.100	50	89	50.0	22.5	35.6	42.8	48.5	.22	SW, NW.	1415
December	7th	30.100	29.600	40	89	36.0	24.0	31.2	38.0	46.5	.17	SW, NE.	860
"	14th	29.800	29.000	40	92	50.0	23.0	34.6	38.0	46.0	.84	SW, NW.	1125
"	21st	30.000	29.200	40	97	50.2	30.0	41.0	40.8	46.0	.77	SW.	1500
"	28th	30.100	29.100	40	90	51.0	27.0	39.7	41.3	45.5	.31	SW, SW, SE.	1115

TABLE NO. 9.
Quarterly Returns of Deaths in the East Sub-District, during the Year 1889, classified according to ages and Diseases.

[illegible]



TABLE No. 7.

TABLE OF DEATHS during the Year 1889, in the Sanitary District of WOLVERHAMPTON: classified according to DISEASES, AGES, and LOCALITIES, showing also the Population of such Localities, and the Births therein during the Year, and the proportion of Deaths which occurred in Public Institutions.

NAMES OF LOCALITIES adopted for the purpose of these Statistics.				Population at all Ages.		Registered Births.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.						MORTALITY FROM SUBJOINED CAUSES DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.														
				Census 1881	Estimated to middle of 1889.		At all Ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards		Measles.	Scarlatina.	Diphtheria.	Croup (not spasmodic)	Whooping Cough.	Enteric Fever.	Diarrhoea and Dysentery.	Rheumatic Fever.	Erysipelas.	Pyæmia.	Phthisis.	Bronchitis, Pneumonia & Pleurisy.	Heart Disease.	Injuries.	All other Diseases.
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	20	22	24	25	26	29	30	31	32	33	
East Sub-District	38,610	39,260	1,417	872	270	178	15	28	181	200	{ Under 5 years ...	28	1	3	4	18	...	42	...	...	3	36	87	...	7	219
												{ 5 years and upwds.	1	...	1	3	1	...	63	101	43	24	187
West Sub-District	37,156	43,599	1,249	737	209	121	28	27	154	198	{ Under 5 years ...	10	3	3	3	29	1	39	...	...	...	3	51	..	7	181
												{ 5 years and upwds.	1	2	...	3	1	5	3	4	3	2	37	59	42	10	235
TOTAL IN BOROUGH	75,766	82,545	2,666	1609	479	299	43	55	335	398	{ Under 5 years ...	38	4	6	7	47	1	81	...	...	3	39	138	...	14	400
												{ 5 years and upwds.	2	2	1	3	1	8	3	4	4	2	100	160	85	34	422
General Hospital ... ..	...	...	...	150	3	26	14	22	67	18	{ Under 5 years ...	1	...	1	...	1	...	...	...	...	...	...	2	...	8	16
												{ 5 years and upwds.	...	1	1	4	...	1	...	1	11	11	9	29	53
Workhouse ... ..	...	...	...	141	12	3	1	1	34	90	{ Under 5 years ...	...	...	...	...	...	...	1	...	...	...	2	2	...	...	10
												{ 5 years and upwds.	1	...	13	14	24	1	73
Deaths occurring in public Institutions in the East Sub-District and not belonging to the Borough ... }	...	...	...	119	6	5	8	14	41	45	{ Under 5 years ...	1	...	...	...	...	...	2	...	...	...	...	1	...	2	7
												{ 5 years and upwds.	...	1	1	2	1	7	11	18	16	51
Deaths occurring in public Institutions in the East Sub-District and entered as 'no home' ... }	...	...	...	11	...	...	...	...	3	8	{ Under 5 years ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
												{ 5 years and upwds.	1	...	1	2	2	...	5
Deaths occurring in public Institutions in the East Sub-District and belonging to the West Sub-District }	...	...	...	63	5	9	2	5	20	22	{ Under 5 years ...	...	...	1	...	...	...	...	...	...	...	1	1	...	3	8
												{ 5 years and upwds.	1	...	1	4	2	5	4	32

TABLE No. 8.

COMPARATIVE DEATHS AND DEATH RATES of the East and West Sub-Districts for the past Seventeen Years.

Year.	EAST SUB-DISTRICT.				WEST SUB-DISTRICT.				BOROUGH.				Estimated population at the middle of the year.		
	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	Number of Deaths.	Rate per 1000	Zymotic Deaths.	Rate per 1000	East.	West.	Borough.
1873	1,125	29.7			631	19.8			1,756	25.1			38,010	31,831	69,906
1874	1,048	27.6			627	19.3			1,675	23.6			38,087	32,463	70,636
1875	1,155	30.3			640	19.3			1,795	25.2			38,163	33,108	71,373
* 1876	1,099	28.2			655	19.0			1,754	23.9			38,241	33,766	72,118
1877	1,157	30.2			611	17.8			1,768	24.3			38,318	34,436	72,871
1878	1,081	28.2			644	18.4			1,725	23.5			38,396	35,119	73,632
1879	1,093	28.5			608	17.0			1,701	22.9			38,474	35,817	74,402
1880	960	24.9			629	17.2			1,589	21.2			38,552	36,528	75,178
* 1881	998	25.9			650	17.5			1,648	21.3			38,629	37,253	75,963
1882	1,056	27.3			657	17.3			1,713	22.3			38,708	37,993	76,756
1883	1,042	26.9			601	15.5			1,643	21.2			38,786	38,748	77,557
1884	1,158 954	29.8 24.6	221	5.6	699 753	17.7 19.1	115	2.9	1,857 1,707	23.7 21.8	336	4.3	38,864	39,516	78,367
* 1885	1,012 813	25.5 20.5	102	2.5	658 720	16.0 17.5	74	1.8	1,670 1,533	20.7 19.0	176	2.1	38,943	40,301	79,185
1886	1,125 933	28.9 23.9	182	4.6	697 746	17.0 18.2	156	3.8	1,822 1,679	22.8 21.0	338	4.2	39,022	41,101	80,012
1887	1,133 918	29.0 23.5	122	3.1	659 720	15.7 17.2	102	2.4	1,792 1,638	22.2 20.3	224	2.7	39,101	41,917	80,847
1888	1,005 812	25.7 20.7	95	2.4	707 768	16.5 18.0	121	2.8	1,712 1,580	21.2 19.4	216	2.6	39,180	42,750	81,692
1889	1,065 872	27.2 22.2	103	2.6	674 737	15.5 16.9	102	2.3	1,739 1,609	21.1 19.5	205	2.4	39,260	43,599	82,545

* These years contained 53 weeks.

TABLE No. 9

	Quarters ending				1879	Quarters ending				1880	Quarters ending				1881	Quarters ending				1882	Quarters ending				1883†	Quarters ending				1884	Quarters ending				1885	Quarters ending				1886	Quarters ending				1887	Quarters ending				1888	Quarters ending				1889																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	29/3	28/6	27/9	27/12		27/3	26/6	25/9	25/12		26/3	25/6	24/9	31/12		1/4	1/7	30/9	30/12		31/3	30/6	29/9	29/12		29/3	2/6	27/9	27/12		31/3	27/6	26/9	2/1*		3/4	3/7	2/10	1/1		2/4	2/7	30/9	31/12		31/3	30/6	29/9	29/12		30/3	29/6	28/9	28/12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Small Pox	1	3	4	1	2	1	3	7	3	1	...	1	5</

‡ These include returns made as "no home."

* These Quarters contained 14 weeks, and the Years 53.

After this year only deaths belonging to the Borough are included under the diseases and the different ages.

TABLE No. 10.

TWENTY-SEVEN LARGE TOWNS POPULATION, 5,203,668.					WOLVERHAMPTON, POPULATION, 82,545.			
					1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Number of Deaths	...	...	...	...	451	393	403	450
Rate per 1000 per annum of Total Deaths	..	..	..	..	21·9	19·1	19·6	21·9
Deaths from Zymotics	...	...	...	...	10	1·8	3·8	2·7
Measles	...	...	...	...	20	37	78	56
Scarlet Fever	...	...	...	...	10	11	11	8
Diarrhoea	...	...	...	...	2	...	1	4
Rate per cent. of Uncertified Deaths	...	...	...	...	3	8	53	13
Deaths under 1 year of age per 1000 Births	...	...	...	...	0·7	1·8	1·2	2·4
					147	166	215	197
EAST SUB-DISTRICT, POPULATION, 39,260.					WEST SUB-DISTRICT, POPULATION, 43,599			
					1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
Total Number of Deaths	...	...	...	...	234	217	196	225
Rate per 1000 per annum of Total Deaths	...	...	...	...	23·9	22·1	20·0	23·0
Deaths from Zymotics	...	...	...	...	0·8	2·8	4·1	2·6
Measles	...	...	...	...	8	28	41	26
Scarlet Fever	...	...	...	...	5	8	9	7
Diarrhoea	...	...	...	...	...	...	1	...
					1	7	26	8
Death Rate per 1000 per annum, England and Wales	...	...	...	...	19·5	17·2	16·7	18·0
Urban Districts...	...	...	...	...	20·0	17·7	17·8	18·9
Rural Districts ...	...	...	...	...	18·6	16·3	14·7	16·4

The above returns for Wolverhampton are taken from the Registrar General's, and include deaths not belonging to it; our rates for the quarters are at most 21·0, 18·3, 18·7, and 20·5; these include deaths returned as "no home."

